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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/718,857	11/21/2003	Vanadis M. Crawford	RSW920030203US1	1362
48816	7590	03/18/2008	EXAMINER	
IBM CORPORATION - RSW (JVL) C/O VAN LEEUWEN & VAN LEEUWEN P.O. BOX 90609 AUSTIN, TX 78709-0609			FLEISCHER, MARK A	
ART UNIT	PAPER NUMBER			
4143				
MAIL DATE	DELIVERY MODE			
03/18/2008	PAPER			

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No. 10/718,857	Applicant(s) CRAWFORD ET AL.
	Examiner MARK A. FLEISCHER	Art Unit 4143

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
 - If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
 - Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED. (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(o).

Status

- 1) Responsive to communication(s) filed on 21 November 2003.
- 2a) This action is FINAL. 2b) This action is non-final.
- 3) Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) Claim(s) 1-24 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) Claim(s) _____ is/are allowed.
- 6) Claim(s) 1-24 is/are rejected.
- 7) Claim(s) 2,9 and 15 is/are objected to.
- 8) Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) The specification is objected to by the Examiner.
- 10) The drawing(s) filed on 21 November 2003 is/are: a) accepted or b) objected to by the Examiner.
 Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
 Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) All b) Some * c) None of:
 1. Certified copies of the priority documents have been received.
 2. Certified copies of the priority documents have been received in Application No. _____.
 3. Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) Notice of References Cited (PTO-892)
 2) Notice of Draftsperson's Patent Drawing Review (PTO-948)
 3) Information Disclosure Statement(s) (PTO/SB/06)
 Paper No(s)/Mail Date 21 November 2003
- 4) Interview Summary (PTO-413)
 Paper No(s)/Mail Date _____
- 5) Notice of Informal Patent Application
 6) Other: _____

DETAILED ACTION

Status of Claims

1. This action is in reply to the Application filed on 21 November 2003.
2. Claims 1-24 are currently pending and have been examined.

Information Disclosure Statement

3. The Information Disclosure Statement filed on 21 November 2003 has been considered. An initialed copy of the Form 1449 is enclosed herewith.

Specification

4. Applicant is reminded of the proper language and format for an abstract of the disclosure. The abstract should be in narrative form and generally limited to a single paragraph on a separate sheet within the range of 50 to 150 words. It is important that the abstract not exceed 150 words in length since the space provided for the abstract on the computer tape used by the printer is limited. The form and legal phraseology often used in patent claims, such as "means" and "said," should be avoided. The abstract should describe the disclosure sufficiently to assist readers in deciding whether there is a need for consulting the full patent text for details. The language should be clear and concise and should not repeat information given in the title. It should avoid using phrases which can be implied, such as, "The disclosure concerns," "The disclosure defined by this invention," "The disclosure describes," etc. Appropriate correction is required.
5. The disclosure is objected to because of the following informalities: The first sentence of the abstract does not conform to the above guidelines.

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6. The disclosure is further objected to because of the following informalities: on page 4, line 5, the word "effects" appears to be misspelled and should be replaced by the word "affects". On page 5, line 1, the phrase "uses to refine" appears to be grammatically incorrect. Examiner believes the phrase "is used to refine". Appropriate correction is required.

Claim Objections

7. Claims 2, 9 and 15 are objected to because of the following informalities: These claims contain the phrase "in response to the applying" and appears to be a grammatical error. Appropriate correction is required.

Claim Rejections - 35 USC § 112

8. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

9. Claims 2, 9 and 15 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. The claim language does not specify what *in response to the applying* refers to. For purposes of examination, Examiner interprets this to mean *in response to the application of the selected metric*.

10. Claim 19 is rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. Claim 19 recites the limitation "wherein the plurality of feedback". There is insufficient antecedent basis for this limitation in the claim.

Claim Rejections - 35 USC § 103

11. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

12. The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

- a) Determining the scope and contents of the prior art.
- b) Ascertaining the differences between the prior art and the claims at issue.
- c) Resolving the level of ordinary skill in the pertinent art.
- d) Considering objective evidence present in the application indicating obviousness or nonobviousness.

13. Claims 1–18 and 20–24 are rejected under 35 U.S.C. 103(a) as being unpatentable over Corral (US 20030188290 A1) in view of Vouk (*Software Reliability Engineering*).

Claims 1, 8 and 14:

Although claims 1, 8 and 14 may be worded and/or structured slightly differently, they have identical scope, hence, are addressed together. Corral, as shown, describes and/or discloses the following limitations:

- A method of applying a plurality of common metrics to a product lifecycle, said method comprising:
 - identifying a plurality of product phases that correspond to the product lifecycle
- (Corral, from [0075] to [0082] states: "To document the Quality Management system, several documents are created: [...] a Process Description that describes all the processes within the corresponding Organization. Preferably, there is a description of the phases, the activities within the phases, and the

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tasks within the activities." (emphasis added) where 'several documents are created' corresponds to *identifying* and 'there is a description of the phases' corresponds to a *plurality of product phases...*);

Corral does not specifically describe and/or disclose the following limitation, but Vouk, as shown, does.

- *selecting one of the common metrics from the plurality of common metrics* (Vouk, in at least page 2, col. 2, last paragraph states: "A metric that is commonly used to describe software reliability is *failure intensity*." (emphasis added) where the fact that this is ubiquitous means it is commonly 'selected' or 'used'.);

Corral further describes and/or discloses the following limitation.

- *applying the selected common metric to each of the plurality of product phases* (Corral, in at least [0261] states: "Producing Process Metrics. As all processes regarding Quality Management are in a common platform and supported by the same tools, QMO tracks process performance and usage by applying metrics to the implemented workflows." (emphasis added) where the 'common platform' and 'same tools' indicates use of the *common metric*.); and

Corral does not specifically describe and/or disclose the following limitation, but Vouk, as shown, does.

- *executing each of the plurality of product phases using the selected common metric* (Vouk, on page 9, col. 1, §5.3.1 states: "Operational profile based testing is quite well behaved, and when executed correctly, allows dynamic evaluation of software reliability growth based on "classical" reliability growth metrics and models and use of these metrics and models to guide the process []." (emphasis added) where 'operational profile based testing' and 'dynamic evaluation...' corresponds to use of a metric in the 'software reliability growth phase' and 'guides' the 'process' which corresponds to a *product phase*.).

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Corral and Vouk both describe the product development process with respect to software products and how various phases of the process are monitored and evaluated using various metrics. Therefore, it would have been obvious to one with ordinary skill in the art at the time of the invention to combine the teaching of Corral and Vouk and utilize common metrics in the product development process as it permits a greater product reliability and more objective monitoring of the development phases. This, in turn, can lead to greater product success and, hence, profitability.

Claims 2, 9 and 15:

Although claims 2, 9 and 15 may be worded and/or structured slightly differently, they have identical scope and, hence, are addressed together. Corral/Vouk describe and/or disclose the limitations of claims 1, 8 and 14, respectively. Corral further describes and/or discloses the following limitations:

- *generating one or more phase goals to correspond to each of the plurality of product phases in response to the applying* (Corral, in at least [0018] states: "defining a set of quality processes adapted to the quality objectives required by the organization" (emphasis added) where 'defining...processes' corresponds to *generating ...phase goals* and 'adapted to ...' corresponds to *to each of the ...product phases* and 'objectives' corresponds to *phase goals*.)

Claims 3, 10 and 16:

Although claims 3, 10 and 16 may be worded and/or structured slightly differently, they have identical scope and, hence, are addressed together. Corral/Vouk describe and/or disclose the limitations of claims 1, 8 and 14, respectively. Corral further describes and/or discloses the following limitations:

- *receiving one or more feedback responses from one or more feedback sources* (Corral, in at least the abstract states: "Data relative to the quality processes is collected and aggregated to generate quality reports." (emphasis added) where the 'data relative...' corresponds to *feedback responses* and 'collected' corresponds to

receiving ... feedback and ipso facto must come from a feedback source. Moreover, Corral in at least [0016] refers to a "feedback quality management action tracking process" and, hence, involves feedback sources.);

- *analyzing one of the feedback responses* (Corral, in at least the abstract goes on to state: "Reports are analyzed and problems are detected through a defect prevention process." (emphasis added) where the 'reports' that are 'analyzed' corresponds to the limitation.); and
- *generating each of the common metrics in response to the analysis* (Corral finally states in the abstract: "Quality actions are initiated in a feedback quality management action tracking process." (emphasis added) where the 'tracking process' corresponds to *generating ...the common metrics* that reflect an evaluation of the process.).

Claims 4, 11 and 17:

Although claims 4, 11 and 17 may be worded and/or structured slightly differently, they have identical scope and, hence, are addressed together. Corral/Vouk describe and/or disclose the limitations of claims 3, 10 and 16, respectively. Corral further describes and/or discloses the following limitations:

- *selecting one of the feedback responses* (Corral states in the abstract: "Quality actions are initiated in a feedback quality management action tracking process." (emphasis added) where the 'tracking process' corresponds to *generating ...the common metrics* that reflect an evaluation of the process. In [0016], Corral states: "Process defects are detected through a defect prevention tool." (emphasis added) where the defects 'detected' corresponds to obtaining some feedback information, hence *selecting ... feedback responses.*);
- *assigning a weighted priority to correspond to the selected feedback response* (Corral, in at least [0345] states: "[This element] represents the Quality management action tracking process 'QMAT' [...] Preferably this process [...] consists of tracking Quality Management Actions. A Quality Management Action may be opened as a

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proposal by..." and in [0352] further states: "Proposals are [...] formally opened by assigning an Actioner, a Due Date, and a Priority." (emphasis added) where 'tracking...' corresponds to obtaining feedback information, 'quality... action' is a *feedback response* which is based on the 'assign[ed]...priority'.); and

- *performing the analyzing using the assigned weighted priority* (Corral, in at least the abstract states: "Reports are analyzed and problems are detected through a defect prevention process. Quality actions are initiated in a feedback quality management action tracking process." (emphasis added) where the reports that are analyzed are based, as noted above, on some assigned priority as also shown in Corral claim 4: "[...] the tracking process further comprises the steps of: recording the identified issue within an issue storing area of the at least one database; assigning to the issue priority, a resolution target date, and an organization member responsible; and communicating to members of the organization actions taken to resolve the issue item." (emphasis added) where 'actions taken...' correspond to *performing the analyzing...*).

Claims 5, 12 and 18:

Although claims 5, 12 and 18 may be worded and/or structured slightly differently, they have identical scope and, hence, are addressed together. Corral/Vouk describe and/or disclose the limitations of claims 3, 10 and 16, respectively. Corral does not specifically describe and/or disclose the following limitations and elements therein, but Vouk, as shown, does:

- *at least one of the feedback sources is selected from the group consisting of a customer survey, a help line response, a technical support response, and a field report* (Vouk, in at least page 1, col. 1, §2, para. 2 states: "In one case, SRE has been credited with reducing the incidence of customer-reported problems, and maintenance costs, by a factor of 10." (emphasis added) where 'customer...' corresponds to *the group ...customer survey* since customer-reported problems are

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typically determined using surveys which assess "customer satisfaction" as shown in Vouk in paragraph 1 of the same page.).

Corral and Vouk both describe the product development process with respect to software products and how various phases of the process are monitored and evaluated using various metrics. Therefore, it would have been obvious to one with ordinary skill in the art at the time of the invention to combine the teaching of Corral and Vouk and utilize information obtained through a feedback process to improve the product as it permits a greater product reliability and customer satisfaction which, in turn, can lead to greater product success and profitability.

Claims 6, 13 and 20:

Although claims 6, 13 and 20 may be worded and/or structured slightly differently, they have identical scope and, hence, are addressed together. Corral/Vouk describe and/or disclose the limitations of claims 1, 8 and 14, respectively. Corral further describes and/or discloses the following limitation.

- *at least one of the plurality of product phases is selected from the group consisting of a planning phase, a design phase, a development phase, a test phase, and a release phase* (Corral, in at least [0319] states: "Common types of problems, [...] (education problems, oversight in the design phase) and common types of suggested actions (tools, documentation)."

Claim 7:

Corral describes and/or discloses the limitations of claim 1 as shown above. Corral further describes and/or discloses the following limitation.

- *the method is performed using an electronic computing device* (Corral, in at least claim 1 states: "A computer implemented method for operating a quality plan in a product development organization comprising a plurality of members and having quality objectives for product development projects [...])."

Claim 21:

Corral, as shown, describes and/or discloses the following limitations:

- *receiving one or more feedback responses from one or more feedback sources, the feedback responses corresponding to the product lifecycle* (Corral, in at least the abstract states: "Data relative to the quality processes is collected and aggregated to generate quality reports." (emphasis added) where the 'data relative...' corresponds to *feedback responses corresponding to the product lifecycle* and 'collected' corresponds to *receiving ... feedback*. Note also, that Corral in at least [0232] specifically refers to *product lifecycle* to wit: "The objective of Quality Inspections (QIs) is to find Rework Items. This should result in saving time and effort by preventing defects or issues in subsequent phases of the development life cycle." (emphasis added) where 'development life cycle' corresponds to *product lifecycle*.);
- *analyzing one of the feedback responses* (Corral, in at least the abstract goes on to state: "Reports are analyzed and problems are detected through a defect prevention process." (emphasis added) where the 'reports' that are 'analyzed' corresponds to the limitation.);
- *generating each of the common metrics in response to the analysis* (Corral finally states in the abstract: "Quality actions are initiated in a feedback quality management action tracking process." (emphasis added) where the 'tracking process' corresponds to *generating ...the common metrics* that reflect an evaluation of the process.);

Note, that the following limitations are identical to those addressed above in the rejection of claims 1, 8 and 14.

- *identifying a plurality of product phases that correspond to the product lifecycle* (See the rejection of claims 1, 8 and 14.);
- *selecting one of the common metrics from the plurality of common metrics* (See the rejection of claims 1, 8 and 14.);

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- *applying the selected common metric to each of the plurality of product phases (See the rejection of claims 1, 8 and 14.);*
- *executing each of the plurality of product phases using the selected common metric (See the rejection of claims 1, 8 and 14.).*

Corral and Vouk both describe the product development process with respect to software products and how various phases of the process are monitored and evaluated using various metrics. Therefore, it would have been obvious to one with ordinary skill in the art at the time of the invention to combine the teaching of Corral and Vouk and utilize common metrics in the product development process as it permits a greater product reliability and more objective monitoring of the development phases. This, in turn, can lead to greater product success and, hence, profitability.

Claims 22–24:

Although claims 22–24 may be worded and/or structured slightly differently, they have identical scope and, hence, are addressed together. **Examiner's Note:** the variances between claims 23 and 24 with respect to claim 22 are all based on elements associated with computer and electronic devices for executing computer code, storing information on computer readable media such as electronic memory and nonvolatile memory such as database storage devices all accessible by processors. Examiner takes **Official Notice** that it is old and well-known as well as commonplace in the workflow management arts to employ such computer related devices, hence the claims 23 and 24, which contain the same substantive limitations as claim 22 are not addressed separately. Corral, as shown, describes and/or discloses the following limitations.

- *A computer implemented method of applying a plurality of common metrics to a product lifecycle, said method comprising:*
 - *receiving one or more feedback responses from one or more feedback sources, the feedback responses corresponding to the product lifecycle (Corral, in at least the abstract states: "Data relative to the quality processes is collected and aggregated to generate quality reports." (emphasis added) where the 'data*

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- relative...' corresponds to *feedback responses corresponding to the product lifecycle* and 'collected' corresponds to *receiving ... feedback*. Note also, that Corral in at least [0232] specifically refers to *product lifecycle* to wit: "The objective of Quality Inspections (QIs) is to find Rework Items. This should result in saving time and effort by preventing defects or issues in subsequent phases of the development life cycle." (emphasis added) where 'development life cycle' corresponds to *product lifecycle*);
- *analyzing one of the feedback responses, wherein the analyzing further includes assigning a weighted priority to correspond to the selected feedback response* (Corral, in at least the abstract goes on to state: "Reports are analyzed and problems are detected through a defect prevention process. Quality actions are initiated in a feedback quality management action tracking process." (emphasis added) where the reports that are analyzed are based, as noted above, on some assigned priority as also shown in Corral claim 4: "[...] the tracking process further comprises the steps of: recording the identified issue within an issue storing area of the at least one database; assigning to the issue priority, a resolution target date, and an organization member responsible; and communicating to members of the organization actions taken to resolve the issue item." (emphasis added) where 'actions taken...' correspond to *performing the analyzing...*);
 - *generating each of the common metrics in response to the analysis* (Corral finally states in the abstract: "Quality actions are initiated in a feedback quality management action tracking process." (emphasis added) where the 'tracking process' corresponds to *generating ...the common metrics* that reflect an evaluation of the process.);
 - *identifying a plurality of product phases that correspond to the product lifecycle* (Corral, from [0075] to [0082] states: "To document the Quality Management

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system, several documents are created: [...] a Process Description that describes all the processes within the corresponding Organization. Preferably, there is a description of the phases, the activities within the phases, and the tasks within the activities." (emphasis added) where 'several documents are created' corresponds to *identifying* and 'there is a description of the phases' corresponds to *a plurality of product phases...*);

Corral does not specifically describe and/or disclose the following limitation, but Vouk, as shown, does.

- *selecting one of the common metrics from the plurality of common metrics* (Vouk, in at least page 2, col. 2, last paragraph states: "A metric that is commonly used to describe software reliability is *failure intensity*." (emphasis added) where the fact that this is ubiquitous means it is commonly 'selected' or 'used'.);

Corral further describes and/or discloses the following limitation.

- *applying the selected common metric to each of the plurality of product phases*
applying the selected common metric to each of the plurality of product phases
(Corral, in at least [0261] states: "Producing Process Metrics. As all processes regarding Quality Management are in a common platform and supported by the same tools, QMO tracks process performance and usage by applying metrics to the implemented workflows." (emphasis added) where the 'common platform' and 'same tools' indicates use of the *common metric*.); and

Corral does not specifically describe and/or disclose the following limitation, but Vouk, as shown, does.

- *executing each of the plurality of product phases using the selected common metric* (Vouk, on page 9, col. 1, §5.3.1 states: "Operational profile based testing is quite well behaved, and when executed correctly, allows dynamic evaluation of software reliability growth based on "classical" reliability growth metrics and models and use of these metrics and models to guide the process []." (emphasis

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added) where 'operational profile based testing' and 'dynamic evaluation...' corresponds to use of a metric in the 'software reliability growth phase' and 'guides' the 'process' which corresponds to a *product phase*.).

Corral and Vouk both describe the product development process with respect to software products and how various phases of the process are monitored and evaluated using various metrics. Therefore, it would have been obvious to one with ordinary skill in the art at the time of the invention to combine the teaching of Corral and Vouk and utilize common metrics in the product development process as it permits a greater product reliability and more objective monitoring of the development phases. This, in turn, can lead to greater product success and, hence, profitability.

14. Claim 19 is rejected under 35 U.S.C. 103(a) as being unpatentable over Corral/Vouk as applied to claim 16 above, and further in view of Bicknell (US 20030018511 A1).

Claim 19:

Corral/Vouk describe and/or disclose the limitations of claim 16 as shown above. Corral/Vouk do not specifically describe and/or disclose the following limitations, but Bicknell, as shown, does.

- *the plurality of feedback corresponds to a first product and wherein the plurality of feedback is applied to a product lifecycle that corresponds to a second product* (Bicknell, in at least [0062] states: "A fifth application module utilizes the information created and gathered up to this point to apply it to the production and support of the product. It also identifies other areas of the organization for improvement to aid in the success of the product or service, and to assist the organization through the use of various feedback mechanisms for improvement and documentation; thus providing repeatability in the product development needs of the organization." (emphasis added) where 'utilizes the information ...' corresponds to *the plurality of feedback responses* and 'apply it ...of the product' corresponds to the application of the feedback to a *first product*. '[U]se of feedback...' also corresponds specifically to *the plurality of feedback* and 'providing repeatability in the product development...'

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corresponds to *is applied to a product lifecycle ...since this encompasses later products and product development cycles, hence corresponds to a second product.*)

Corral, Vouk and Bicknell all teach elements of product development systems and how they are measured, evaluated and improved. Bicknell specifically teaches how to incorporate feedback mechanisms into institutional or enterprise-wide systems so as to improve other products using a type of "lessons learned" environment (see Bicknell [0091]). Therefore, it would have been obvious to one with ordinary skill in the art at the time of the invention to combine the teachings of Corral, Vouk and Bicknell and incorporate the lessons learned capability of Bicknell because use of feedback mechanisms and employment of lessons learned techniques "within the defined industry [] maximizes efficiency and skill set excellence" (Bicknell [0139]), hence improves the organization that engages in product development and thereby yields improvements in quality and profitability.

Conclusion

Any inquiry of a general nature or relating to the status of this application or concerning this communication or earlier communications from the Examiner should be directed to Dr. **Mark A. Fleischer** whose telephone number is **571.270.3925**. The Examiner can normally be reached on Monday-Friday, 9:30am-5:00pm. If attempts to reach the examiner by telephone are unsuccessful, the Examiner's supervisor, **James A. Reagan** whose telephone number is **571.272.6710** may be contacted.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see [<http://pair-direct.uspto.gov>](http://portal.uspto.gov/external/portal/pair). Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at **866.217.9197** (toll-free).

Any response to this action should be mailed to:

Commissioner of Patents and Trademarks

Washington, D.C. 20231

or faxed to **571-273-8300**.

Hand delivered responses should be brought to the **United States Patent and Trademark Office Customer Service Window**:

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Mark A. Fleischer, Ph.D.
/Mark A Fleischer/

Examiner, Art Unit 4143 12 March 2008
/JAMES A REAGAN/Supervisory Patent Examiner, Art Unit 4143